The Effect of Application of Planned Budget and Supply Chain Management on the Implementation of Applied Studies

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Abstract— Budgeting and supply chain management is in principle the allocation of resources and requires selection and prioritization. In this research, the factors affecting the implementation of the activity-based costing method in the budgeting of the various governmental organizations, has been investigated. The current study is an applied research and this research is a cross-sectional and descriptive-analytic study that utilizes a questionnaire to collect information. The statistical population of the study consisted of governmental organizations that had some kind of state budget in 2016. The results of the research indicate that in 60 governmental organizations, other than the ability to evaluate performance, other requirements are not required to implement the activity-based costing method in the operational budgeting, including employee empowerment, technical feasibility, legitimacy (legal, procedural and organizational legitimacy), and acceptability (political acceptability, management, and consistency of incentives). Based on the findings of the present study, in the governmental organizations studied, the effective factors necessary for performance-based costing in operational budgeting are not yet available. However, without using the new methods of costing in the operational budgeting, talking about reforms in the budgeting system, and shifting from program to operational budget is a difficult task.

Keywords—*Activity-Based Costing, Budget, Governmental Organizations, Operational Budgeting, Supply Chain Management*

1. Introduction

Adapting to the features of the present age requires the optimal management of activities and processes, not in the realm of a single organization but in the entire supply chain. Also, the need for integrated information systems has been found with the industrial development of enterprises through information systems. The budget as the most important financial instrument of government operations plays an important role in achieving the goals of long-term development plans of the country. Hence, efforts to improve it have always been a concern. In general, over the last decades, budget discussions focused on government inputs, such as the amount of resources, number of employees, etc., and various theories were presented for managing and managing public expenditure, the most well-known of which is traditional government management [1-3]. By the end of the 1980s, the intellectual thought was considered to be a public sector management area. But with the appearance of its negative dimensions and its weaknesses, the expansion of the responsiveness culture of executives, and the advancement of government management techniques and management accounting, a new intellectual trend emerged in the United States and the United States as the new state governance, which emphasized on privatization, contracting Performance indicators and performance evaluation. Since the success of the new state-government management, operational budgeting has been raised in state service systems in advanced countries, and public sector officials (as respondents) and citizens (in response) have called for more information such as results or outputs, effectiveness, efficiency and cost of the activities included in the state budget. Operational budgeting is a planning, budgeting, and evaluation system that emphasizes the relationship between budget expenditures and expected outcomes. Within the framework of operational budgeting, different departments of the administration are accountable for certain standards, called performance indicators, and managers have more choice in determining the best way to achieve the results. On the other hand, within the framework of such a way, the involvement of policymakers, managers, and even citizens in the form of strategic plans, cost priorities and performance evaluation is done. Recognizing the link between strategic planning

and resource allocation, considered in terms of long-term horizons, is another operational budgeting objectives. [3] The idea behind operational budgeting is that if policymakers make financial decisions objectively based on efficiency and effectiveness, then they and the people can have a clearer judgment on the functioning of the government. In fact, operational budgeting, by linking budget decisions and government performance, strengthens government accountability to legislators and people. In general, the operational budgeting process seeks to answer these questions: Where is our current position? Where are we going How should we achieve these goals? How should we measure our progress? "[4] Today, the spread of the accountability culture, authorities (as responsible) and citizens (in response) calls for more information such as the results or outcomes, the effectiveness, efficiency and cost of the activities in the state budget. [5] In addition, the foundation of the accounting system in the public and non-governmental sectors is based on the concept of accountability. According to this concept, governments must be accountable to citizens and can justify the process of collecting funds and how to use these resources properly. [6] The lack of appropriate scientific information on the cost of services provided in the public sector has failed to take any action to implement the operational budgeting and Article 44 of the constitution in the field of privatization of government departments. Therefore, the design and implementation of a proper costing system seems necessary.

2. Research Method

Empowerment: One of the common reasons for inefficiencies and the proper implementation of new costing systems, such as the activity-based cost-based costing system in the government's budget structure, goes back to the capacity and empowerment of government organizations. According to research such as [6], three aspects of organizational empowerment are unambiguous in performance evaluation, employee empowerment and technical empowerment.

Legitimacy (authority): The implementation of the scientific method of cost-based costing depends on the operational budgeting to the mechanisms of legitimacy and government authority. If the methods for estimating budgeting are not legitimate, then other steps in the process of implementation of the system will be disrupted. In [7], in social science culture, authority is defined as power recognized, accepted, respected and obedient. From the perspective of researchers such as [1-3] government organizations and organizations, three aspects of legitimacy, including legal legitimacy, procedural legitimacy, and organizational legitimacy, are important.

Acceptance: The last factor that has been mentioned in the research on costing implementation in various organizations and institutions is the acceptance factor. Acceptance of activity-based costing is defined as the acceptance of the concept of activity-based costing. That is, according to Definition [8], though the idea may not be implemented at all, it influences the thinking method in the organization. Therefore, the acceptance of activity-based costing includes the number of organizations willing to accept. Accepting the lack of public institutions, organizations and employees can be a major obstacle to the use and use of performance information. Three aspects of acceptance from the viewpoint of researchers such as [3 and 9] include political acceptability, managerial acceptance, and consistency of incentives.

Integration is one of the main issues in the supply chain management literature and it is used in the creation of a facility for recording and storing data or unit information, consistent and correct for use in systems used or to meet business needs. The role of integrity is an important factor in achieving success.

3. Results

3.1. Descriptive results related to the research variables

Table 1 shows the descriptive data related to the operational budgeting variables, as seen from the obtained mean for planning 41.39, cost analysis (ABC) 38.54 and performance management 40.61 May Be The average for the operational budgeting is 120.54 and the liability is 41.06.

Table 1. Descriptive results for research variables

Variable	Mean	Standard deviation	Minimum	Maximum	Domain	Number
Planning	41.39	4.24	29	50	21	87
Cost Analysis (ABC)	38.54	5.03	27	48	21	87
Performance management	40.61	5.88	24	50	26	87
Operational budgeting	120.54	13.88	81.00	146.00	65.00	87
Responsibility	41.06	5.10	27	50	23	87

3.2. Results of testing hypotheses

In this research, data analysis has been carried out using descriptive and inferential methods using appropriate statistical methods. Descriptive statistics techniques including frequency tables, averages, standard deviations, etc. were used for data analysis. After examining the normal distribution of the research data (Kolmogorov-Smirnov test), for the inferential analysis of the first hypothesis, Pearson correlation analysis method and for the subsequent hypotheses, due to existence of several predictive variables (operating budget elements) and criterion variable, responsibility for accountability of the method Multivariate regression analysis has been used.

Hypothesis 1: There is a meaningful relationship between operational budgeting and improving accountability responsibilities.

Table 2. The results of correlation between operational budgeting variables and accountability responsibilities

Variable	Results	Responsibility variable
Operational budgeting	Correlation	0.745
	Significance	0.001
	Number	87

Table 2 shows the results of Pearson correlation analysis for operational budgeting and accountability liability variables. The results indicate that the relationship between these variables (r = 0.745) is significant at 0.001. Therefore, by confirming the research hypothesis, it can be said that there is a meaningful relationship between operational budgeting and improving accountability responsibilities.

To characterize the relationship between each operational budgeting element and the accountability variable, the multivariable regression analysis method was used, the results of which are presented in tables 3, 4 and 5.

Table 3. The results of correlation between variables of operational budgeting elements and responsibility responsiveness

Variable	Results	Responsibility
Planning	Correlation	0.675
	Significance	0.001
Cost Analysis (ABC)	Correlation	0.682
	Significance	0.001
Performance management	Correlation	0.687
	Significance	0.001

Table 3 shows the correlation coefficients of planning variables, cost analysis (ABC), performance management with variable accountability liability. As shown in the table above, all independent variables of the research correlate with improving accountability responses. This correlation has also been significant. The results of regression analysis are presented in the following tables:

Table 4. Summary of the results of regression analysis by Inter method

Model	R	R2	Modified R2	Standard error
Inter	0.745	0.555	0.539	1.733

Table 4 shows the summary of the results of regression analysis using the Inter method. In this analysis, the R value obtained is 0.74 and the R2 (Coefficient of determination) is 0.55. The results indicate that operational budgeting can predict 55 percent of the variability in responsiveness.

Table 5. Summary of standardized coefficients for research variables

Variable	Not standardized coefficients		Standardized coefficients	t	Significance
	B	Standard error	Beta		
Interaction	3.864	1.846		2.093	0.039
Performance management	0.127	0.054	0.293	2.358	0.021
Cost Analysis (ABC)	0.140	0.063	0.276	2.231	0.028
Planning	0.148	0.074	0.246	1.987	0.050

Hypothesis 1-1 - There is a meaningful relationship between planning and improving accountability responsibilities.

The results of Table (5) show that the relationship between planning variable in general (t = 1.987) is significant at 0.050. Therefore, it can be said that there is a meaningful relationship between planning and improving accountability responsibilities. In addition, the observed beta in this variable is 0.25, which means that this variable can predict about 25% of the variability in responsiveness variable.

Hypothesis 1-2 - There is a significant relationship between cost analysis (ABC) and improvement of accountability.

The results of Table (5) show that the relationship between the cost analysis (ABC) (overall) (t = 2.231) at 0.028 is significant. Therefore, it can be said that there is a meaningful relationship between cost analysis and improvement of accountability responsibilities. In addition, the observed beta in this variable is 0.28, which means that this variable can predict about 28% of the variability in responsiveness variable.

Hypothesis 1-3 - There is a significant relationship between performance management and accountability improvement.

The results of Table 5 indicate that the relationship between the variable of performance management (T = 2.358) is significant at 0.021. Therefore, it can be said that there is a meaningful relationship between performance management and improvement of accountability responsibility.

In addition, the observed beta in this variable is 0.29, which means that this variable can predict about 29% of the variability in the responsiveness variable.

Table 6. Summary of the results of the hypotheses

Row	Hypothesis	Result
1	There is a significant relationship between operational budgeting and accountability improvement.	Confirmed
1-1	There is a significant relationship between planning and improving accountability responsibilities.	Confirmed
1-2	There is a significant relationship between cost analysis (ABC) and improved accountability.	Confirmed
1-3	There is a significant relationship between performance management and accountability improvement.	Confirmed

Regarding the above table, it is noted that there is a significant relationship between the hypothesis of a research title between operational budgeting and improvement of accountability in executive organizations in East Azarbaijan province.

The second hypothesis of the research is that there is a significant relationship between planning and improving accountability in executive organizations in East Azarbaijan province, was confirmed.

The third hypothesis of the study, entitled Cost-effectiveness analysis (ABC), and the improvement of accountability responsibility in executive organizations in East Azarbaijan, was confirmed.

The fourth hypothesis of the research is that there is a significant relationship between performance management and improvement of accountability in executive organizations in East Azarbaijan province.

Review the power of the relationship of each of the factors mentioned in the above hypotheses, namely, planning, cost analysis (ABC) and performance management in operational budgeting with improved accountability, show that performance management, cost analysis (ABC) and planning With the beta of 29%, 28% and 25% respectively, they had the highest potential to predict variable responses to accountability.

4. Conclusion

Budgeting benefits based on planning includes promoting public awareness of government performance, linking device costs with expected outcomes, improving the understanding of executive operations, goal-based and performance-based evaluations, the opportunity to determine the results and the expected quality level, the emphasis on outcomes and outcomes. In this research, resource planning system is known to be an important and effective factor in supply chain management. In addition to confirming the main hypothesis that the effect of the organization's resource planning system on supply chain management has been shown, the research hypotheses such as the impact of integration, production planning and control on the organization's resource planning system were also confirmed. With the acceptance of the main hypothesis, it became clear that the organization's resource planning system had an impact on supply chain management. The first hypothesis of the research points to the impact of integration on supply chain management, confirming this hypothesis that, despite the integrity of supply chain management, the organization improves. The results of studies in 2016 indicated that information technology and organizational cooperation had a significant and positive effect on supply chain performance. This research is important for measuring the implications of the organization's resource planning system in the realm of the system's modules. The results are valuable because they emphasize the purchasing module for the organization's resource planning system and its implementation in a real environment. Research findings also show that if system modules are fully implemented, the results from their implementation and the effects on the performance of the supply chain are consistent with previous studies. Apart from planning and controlling, the most important factor in managing »Some experts believe the effectiveness of an organization is how to communicate between segregated and separate parts. On the other hand, a manager needs to get in touch with them to receive feedbacks as well as other relevant data and information from all parts of the organization. As such, its communications and tools play a crucial role in effectively managing an organization's supply chain. Using the organization's resource planning system improves the performance of supply chain management in various areas such as the integration of the internal business process, increasing the flow of information among different parts of the organization (in the present study, the supply chain module, the purchasing system) improving the organization's relationship with non-organization suppliers, customers and supply chain partners, improve product quality, flexibility, and ultimately reduce asset and operating costs, in other words, the success of the organization's resource planning system improves the performance of supply chain management, and the organization benefits from the resource planning system, such as easy access to data and information, improved efficiency, reduced cycle time, cost savings, data avoidance And a waste of operation. Using the system's

facilities, it can be traced to the effect of activities throughout the various parts of the organization, and based on the possibility of coordinating all activities in different sectors, it has been attempted to plan large in order to create competitive advantages. In this research, data analysis has been carried out mainly using descriptive and inferential statistics using appropriate statistical methods. Descriptive statistics techniques including frequency tables, averages, standard deviations, etc. were used for data analysis. After examining the normal distribution of research data (Kolmogorov-Smirnov test), for the inferential analysis of the first hypothesis, Pearson correlation analysis method and for subsequent hypotheses, due to existence of several predictive variables (operating budget elements) and criterion variable, responsibility for answering the method Multivariate regression analysis has been used.

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